

## 1.0 Introduction

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) is responsible for implementing the final response action specified in the final Corrective Action Decision/Record of Decision (CAD/ROD) for Rocky Flats (EPA, DOE, and CDPHE 2006) issued on September 29, 2006. (The CAD/ROD is provided in Attachment A1 for reference.) Figure 1–1 shows the location of the Rocky Flats property.

Under the CAD/ROD, two Operable Units (OUs) were established within the boundaries of the Rocky Flats property: the Central OU (COU) and the Peripheral OU (POU). The COU consolidates all areas of the Site requiring additional remedial or corrective actions, while also considering the practicalities of future land management. The CAD/ROD determined that the appropriate response actions for the COU were institutional controls, physical controls, and continued monitoring. The POU surrounds the COU and includes the remaining, generally unaffected, portions of the Site. The final CAD/ROD indicated that conditions in the POU are suitable for unrestricted use and no response action was required. The U.S. Environmental Protection Agency (EPA) subsequently published a Notice of Partial Deletion from the National Priorities List for the POU on May 25, 2007.

On July 12, 2007, most of the property outside the COU was transferred to the U.S. Department of the Interior for the establishment of a national wildlife refuge to be managed by the U.S. Fish and Wildlife Service (USFWS), pursuant to the Rocky Flats National Refuge Act of 2001 (Public Law 107-303). EPA certified that cleanup and closure of Rocky Flats were complete and the COU remedy was operating properly and successfully, in accordance with requirements for DOE to transfer land to USFWS for establishing the refuge. The COU is the site governed by *Rocky Flats Legacy Management Agreement* (RFLMA; DOE 2007a) requirements.

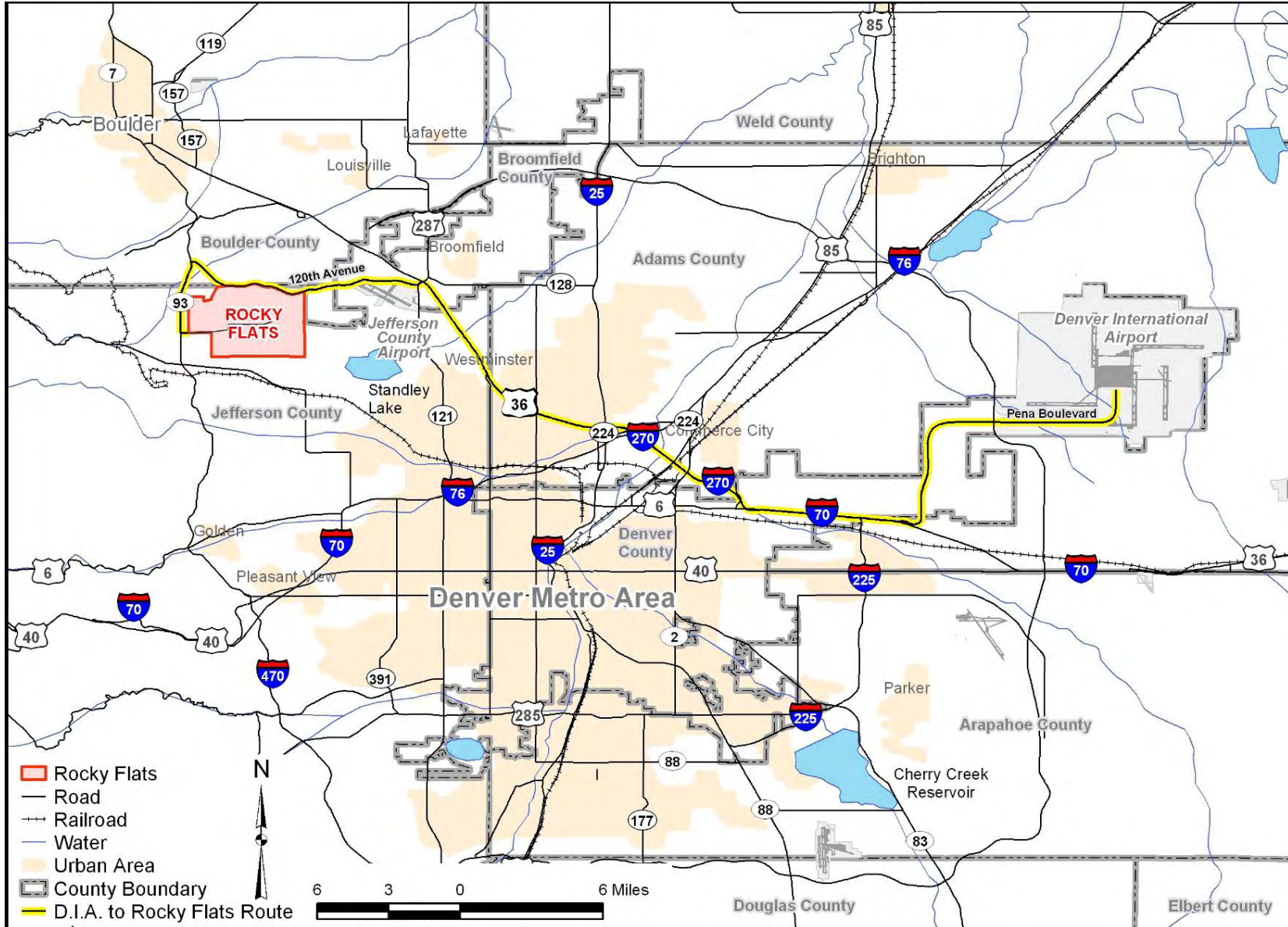
Figure 1–2 is a map of Rocky Flats showing the location of the COU, the lands retained by DOE-LM outside of the COU, and the remaining property that has been transferred to USFWS.

DOE, EPA, and the Colorado Department of Public Health and Environment (CDPHE) have chosen to implement the monitoring and maintenance requirements of the CAD/ROD as described in RFLMA, executed on March 14, 2007. RFLMA Attachment 2 defines the COU remedy surveillance and maintenance requirements. The requirements include environmental monitoring; maintenance of the erosion controls, access controls (signs), landfill covers, and groundwater treatment systems; and operation of the groundwater treatment systems.

RFLMA Attachment 2 stipulates that DOE employ administrative procedures to control activities in accordance with the institutional controls and to meet quality assurance and control program requirements. RFLMA also recognizes that other procedures are established to guide work and implement best management practices (BMPs).

### 1.1 Purpose

The *Rocky Flats Site Operations Guide* (RFSOG) was prepared by DOE-LM to serve as the primary internal document to guide work, satisfy the requirements of RFLMA, and implement BMPs at the Site. As a “desktop procedure,” the RFSOG explains how DOE-LM will fulfill its long-term surveillance and maintenance obligations at the Site.



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Figure 1-1. Location of the Rocky Flats Site, Colorado



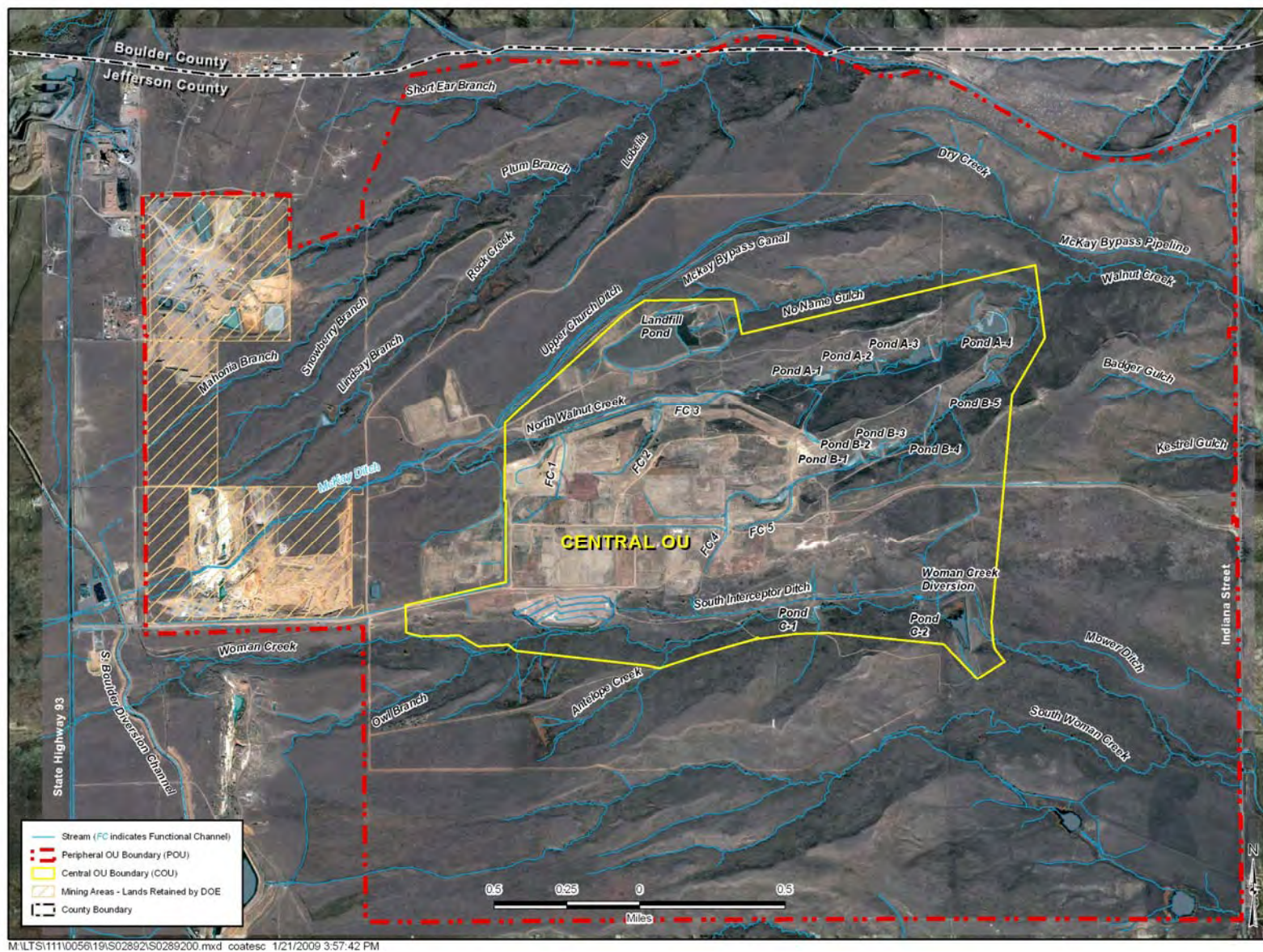


Figure 1-2. Site Map for the Rocky Flats Site, Colorado

The RFSOG incorporates applicable DOE-LM policy and guidance and meets the 10-Year Site Plan requirement of DOE Order 413.3. DOE-LM is responsible for radiological and other hazardous substances that remain at the Site. Implementation of surveillance and maintenance activities at the Site is guided by this RFSOG and other specific documents that are attached, appended, and referenced herein.

## 1.2 Rocky Flats Background

Rocky Flats was established in 1951 as part of the United States' nationwide nuclear weapons complex to manufacture nuclear weapons components from various radioactive and hazardous materials. DOE (or its predecessor, the Atomic Energy Commission) and its contractors managed and operated Rocky Flats under authorization of the Atomic Energy Act. Overall, nuclear weapons production activities within the former Industrial Area (IA) resulted in contamination of environmental media including surface water, groundwater, soil, and air. The nature and extent of Rocky Flats Plant (RFP)-related contamination, potential impacts to human health and the environment, and actions performed to mitigate the risk to human health and the environment are described in the *RCRA Facility Investigation-Remedial Investigation/Corrective Measures Study-Feasibility Study Report for the Rocky Flats Environmental Technology Site* (Remedial Investigation/Feasibility Study [RI/FS] Report) (DOE 2006a) and summarized in the *Rocky Flats Environmental Technology Site Proposed Plan* (Proposed Plan) (DOE 2006b); the final action was selected in the CAD/ROD.

Figure 1–3 shows the subsurface features of buildings, process waste lines, and associated remaining infrastructure after closure. Figure 1–4 shows the pits and trenches remaining in the subsurface after closure. Figure 1–5 shows remaining gas, electric, and dataline utilities on the Rocky Flats property. All utilities have been disconnected in the COU (utility lines running through the COU are in easements and maintained by the utility company), and at monitoring stations outside of the COU. Figure 1–6 shows the Site before and after closure.

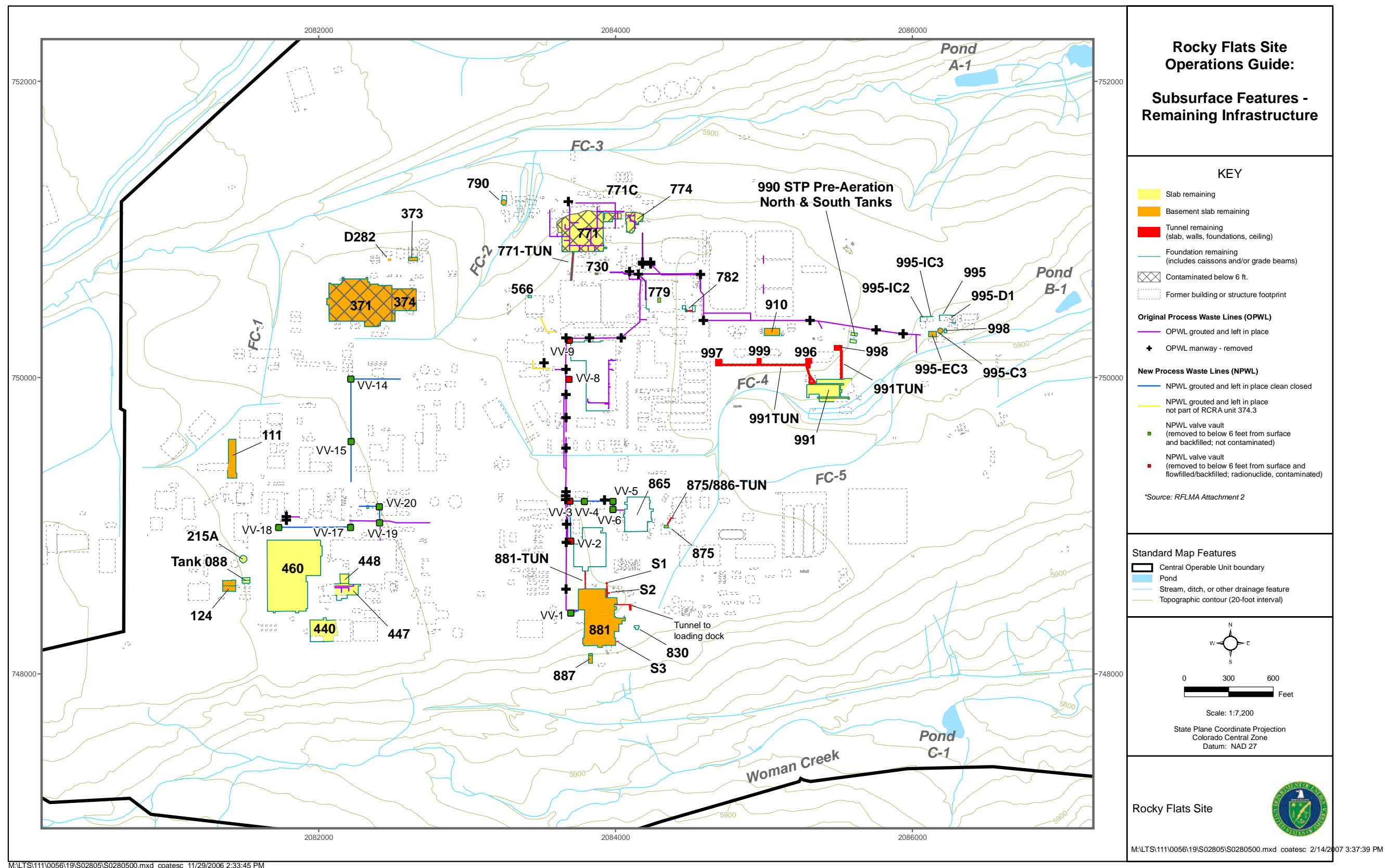
Additional information related to the setting and features of the Rocky Flats Site is included in Section 2.0.

## 1.3 RFSOG Organization

The RFSOG is organized as follows:

- Section 1.0, “Introduction,” presents the purpose and organization of the RFSOG, as well as a regulatory overview and a brief Site history.
- Section 2.0, “Environmental Setting,” describes the geology, hydrology, hydrogeology, and ecology of the Site.
- Section 3.0, “Access Controls,” includes a discussion of the Site’s institutional and physical controls, as well as the requirements for both on- and off-Site (office) access.
- Section 4.0, “Routine Site Operations and Maintenance,” details the operation and maintenance (O&M) of the Site’s ponds and surface water control features, the Present Landfill (PLF) and Original Landfill (OLF), and the groundwater treatment systems. Erosion control and revegetation at the Site are also included.





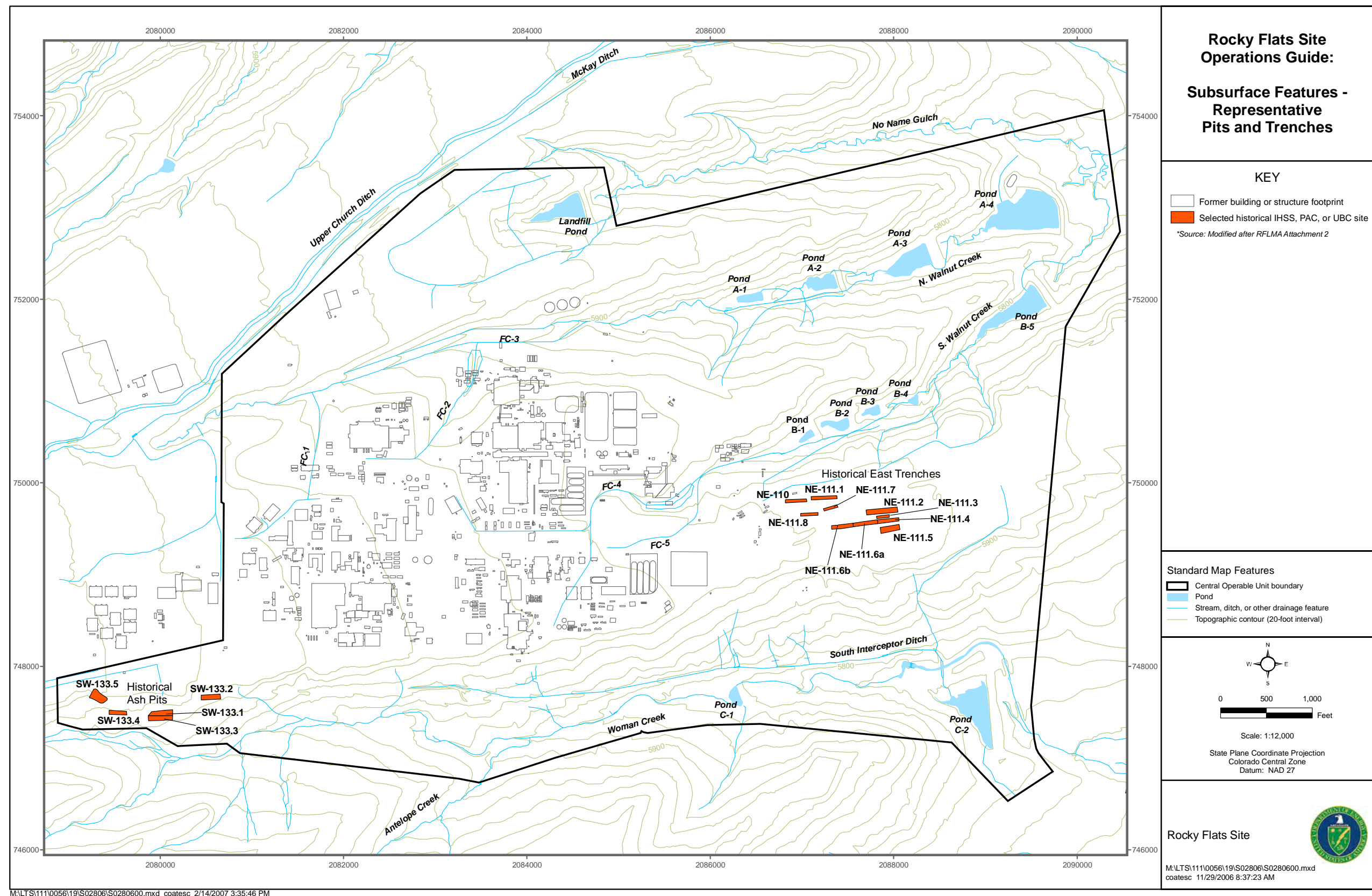


Figure 1-4. Subsurface Features—Pits and Trenches (reproduced from RFLMA)



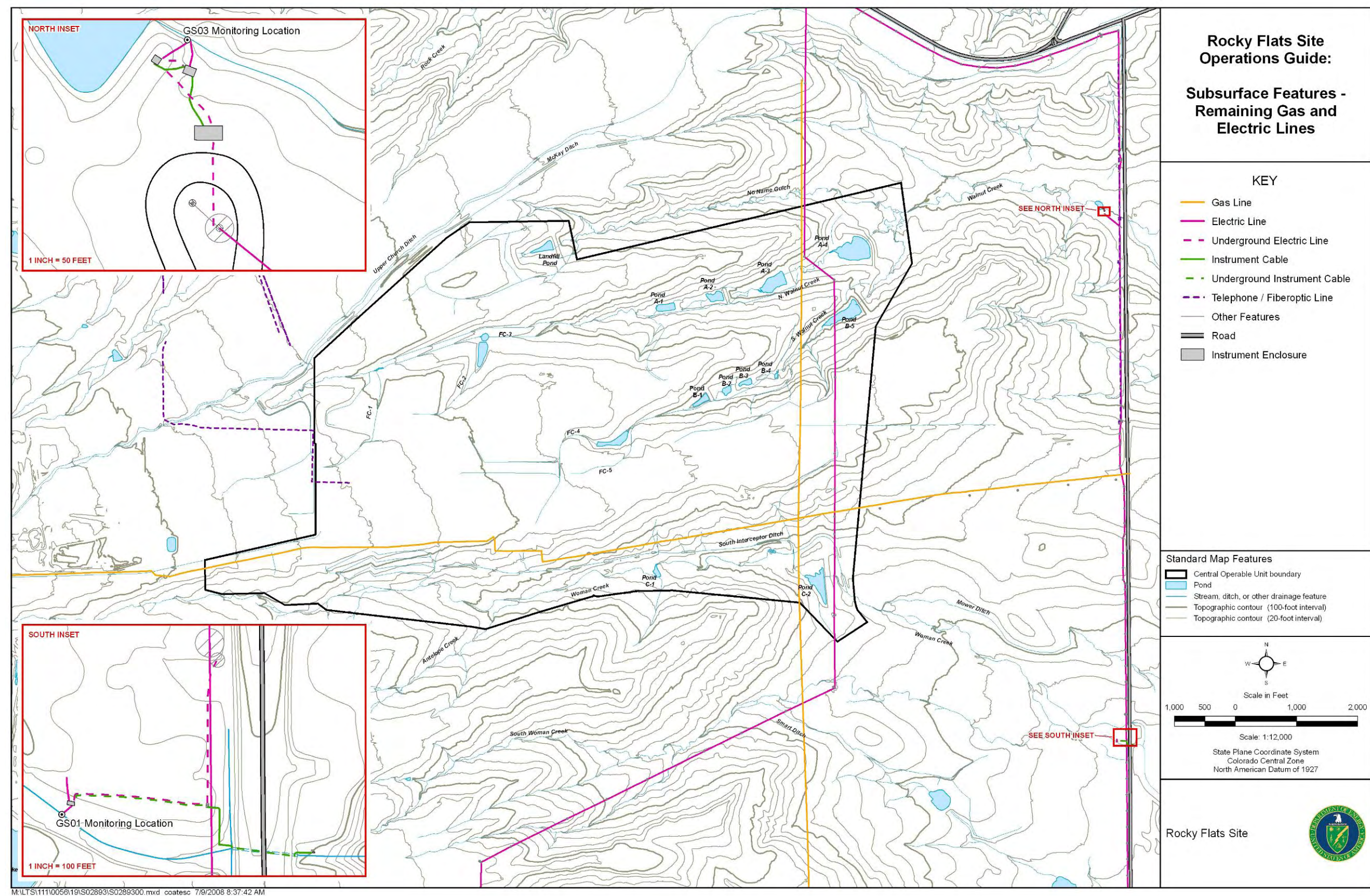


Figure 1–5. Remaining Gas, Electric, and Dataline Utilities Extending into the COU and Including Indiana Street Points of Compliance

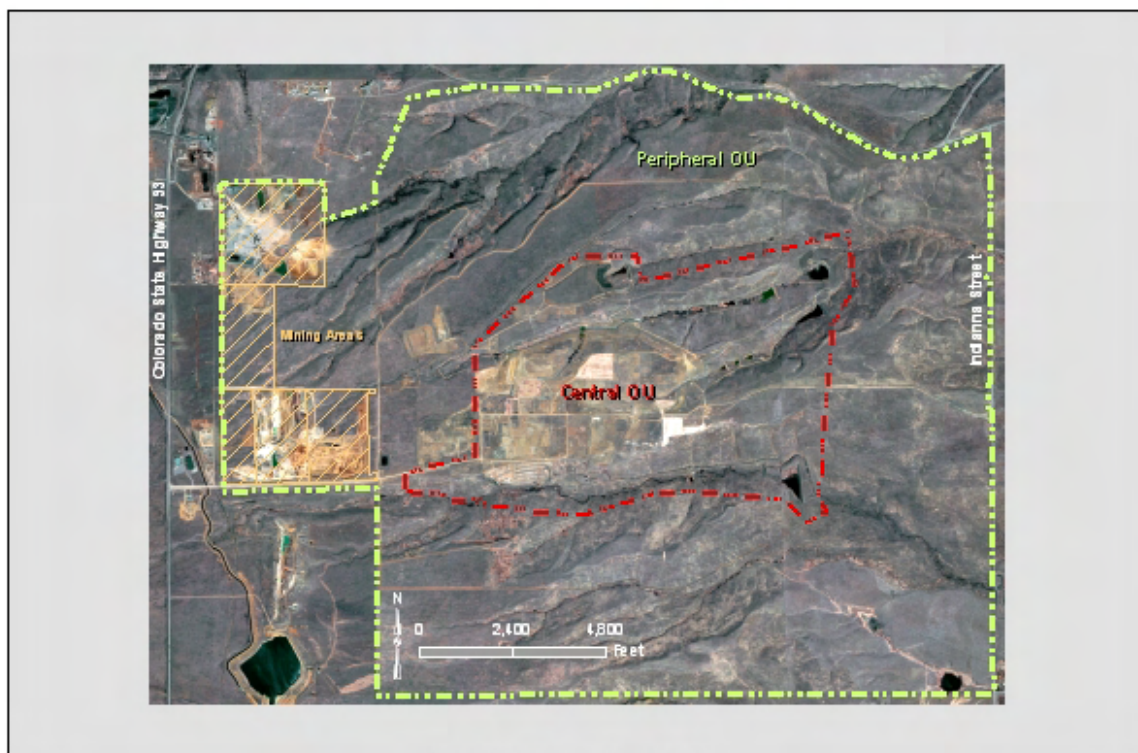


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**Rocky Flats Environmental Technology Site - 1994**



**Rocky Flats Site - 2008**

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*Figure 1–6. Rocky Flats Before and After Closure*

- Section 5.0, “Routine Site Inspections,” describes how and when Site personnel will perform routine inspections at the Site.
- Section 6.0, “Routine Environmental Monitoring,” provides a discussion of the various routine monitoring activities conducted at the Site, including water (surface water and groundwater), ecological, and air quality monitoring.
- Section 7.0, “O&M of Monitoring Locations,” covers the necessary O&M of the surface water monitoring locations and groundwater monitoring wells.
- Section 8.0, “Environmental Data Collection, Evaluation, and Management,” describes the actual sample and data collection procedures, as well as data evaluation and data management. Data quality assurance (QA) and quality control (QC) are also discussed.
- Section 9.0, “Work Planning Processes,” focuses on the Legacy Management Support (LMS)- and Rocky Flats-specific work planning processes. The section also includes discussion of Site activities considered to be nonroutine, which will require additional consideration and planning. Such activities include intrusive work, nonroutine sampling and characterization, controlled burns, and source evaluations.
- Section 10.0, “Health and Safety/Training,” includes a discussion of the Site-specific training requirements as well as hazard communication and sample handling.
- Section 11.0, “Emergencies and Corrective Action,” covers both Site and office emergencies, including emergency response for dams. This section also includes a discussion of corrective actions and lessons learned.
- Section 12.0, “Information Management,” provides an overview of how the Rocky Flats records, both active and inactive, are maintained. A discussion of the Administrative Record (AR) and the corresponding post-closure record system is also included.
- Section 13.0, “Regulatory Compliance,” describes activities at the Site that may require regulatory compliance activities, notification, or reporting in addition to that required by RFLMA.
- Section 14.0, “Waste Management,” describes how Site personnel will handle the various wastes generated during the monitoring and surveillance activities described in this RFSOG.
- Section 15.0, “Reporting,” describes the various reporting requirements for the Site, including RFLMA reportable conditions, routine reporting, emergency notification, and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 5-Year Review.
- Section 16.0, “Public Involvement,” describes the public participation activities being conducted to support the DOE goal of actively informing the public about Rocky Flats activities.
- Section 17.0, “References,” lists the references used in generating this RFSOG.

This RFSOG also includes several appendices as follows:

- Appendix A, “Emergency Contact Information”;
- Appendix B, “Annual Site Inspection Checklist”;
- Appendix C, “Example Contact Record”;



- Appendix D, “Rocky Flats System Closure Plans and Sector Closeout Reports”;
- Appendix E, “Real Property Records”;
- Appendix F, “Rocky Flats Site Soil Disturbance Evaluation Procedure”;
- Appendix G, “Rocky Flats Sample Preparation Room Procedures”;
- Appendix H, “Site-Specific Checklist”;
- Appendix I, “Rocky Flats Health and Safety Addendum”;
- Appendix J, “Rocky Flats, Colorado, Site Erosion Control Monitoring and Maintenance Inspection Procedure”; and
- Appendix K, “Migratory Bird Treaty Act Issues, Natural Resource Management Activities, and Maintenance and Project Activities at the Rocky Flats Site.”

In an effort to ensure that this RFSOG is a complete, stand-alone operations guide, copies of the applicable documents used by Site personnel are included as attachments to this report. These attachments, grouped by subject matter, are as follows:

### ***General***

- Attachment A1, “Corrective Action Decision/Record of Decision for Rocky Flats Plant (USDOE) Peripheral Operable Unit and Central Operable Unit”
- Attachment A2, “Rocky Flats Legacy Management Agreement”
- Attachment A3, “Environmental Covenant”
- Attachment A4, “Lease Agreement of September 26, 2006, Between Broomfield, Colorado, and DOE (Includes Substitute Water Supply Plan [SWSP])”
- Attachment A5, “Use Agreement between DOE and the Woman Creek Reservoir Authority”
- Attachment A6, “Rocky Flats Refuge Act”
- Attachment A7, “Ronald W. Reagan Defense Authorization Act for Fiscal Year 2005, Sec. 3118, Local Stakeholder Organizations for 2006 Closure Sites”
- Attachment A8, “H.R. 1815 National Defense Authorization Act for Fiscal Year 2006 (Mining Rights at Rocky Flats)”

### ***Surface Water***

- Attachment B1, “Operations and Maintenance Plan for the Rocky Flats Surface Water Control Project”
- Attachment B2, “Emergency Response Plan for the Rocky Flats Site Dams”

### ***Groundwater***

- Attachment C1, “Operation and Maintenance Manual for Rocky Flats Groundwater Treatment Systems”

### ***Landfills***

- Attachment D1, “Final Landfill Monitoring and Maintenance Plan for the Original Landfill”
- Attachment D2, “Present Landfill Monitoring and Maintenance Plan and Post-Closure Plan”

### ***Ecology***

- Attachment E1, “Master Rocky Flats Site Ecology Reports Reference List”
- Attachment E2, “Memorandum of Agreement for the Administration of a Wetland Bank at Rocky Flats”
- Attachment E3, “Programmatic Biological Assessment for Department of Energy Activities at the Rocky Flats Environmental Technology Site, Part I”
- Attachment E4, “Programmatic Biological Assessment for Department of Energy Activities at the Rocky Flats Environmental Technology Site, Part II”
- Attachment E5, “Rocky Flats, Colorado, Site Revegetation Plan”
- Attachment E6, “Rocky Flats, Colorado, Site Vegetation Management Plan”
- Attachment E7, “Rocky Flats, Colorado, Site Wetland Mitigation Monitoring and Management Plan”
- Attachment E8, “Erosion Control Plan for Rocky Flats Property Central Operable Unit”
- Attachment E9, “Ecological Monitoring Methods Handbook for the Rocky Flats, Colorado, Site”
- Attachment E10, “Wildland Fire Management Plan for the Rocky Flats Site”

### ***General Operations***

- Attachment F1, “Rocky Flats Environmental Technology Site Survey Control Network Report”
- Attachment F2, “Memorandum of Understanding between the Jefferson County Sheriff and the DOE”
- Attachment F3, “Rocky Flats, Colorado, Site Chemical Management Plan”